

CLAIMS

1. A method for screening a candidate compound for an antitumor drug, said method comprising the steps of:

- 5 (a) providing animal cells showing cytokine-independent proliferation due to expression of FLT3/ITD;
- (b) contacting said cells with a test sample and culturing said cells in the absence of cytokines;
- (c) detecting the proliferation of said cells; and
- 10 (d) selecting a compound that inhibits the proliferation of said cells.

2. A method for screening a candidate compound for an antitumor drug, said method comprising the steps of:

- 15 (a) providing animal cells showing cytokine-independent proliferation due to expression of FLT3/ITD;
- (b) contacting said cells with a test sample and culturing said cells in the absence of cytokines;
- (c) detecting phosphorylation of FLT3/ITD in said cells; and
- 20 (d) selecting a compound that inhibits the phosphorylation of FLT3/ITD in said cells.

3. A method for screening a candidate compound for an antitumor drug, said method comprising the steps of:

- 25 (a) providing animal cells showing cytokine-independent proliferation due to expression of FLT3/ITD;
- (b) inoculating a non-human mammal with said cells to develop tumors;
- (c) administering to said non-human mammal a test sample before or after the inoculation with said cells, and detecting the development 30 of the tumor; and
- (d) selecting a compound that inhibits the development of the tumor in said non-human mammal.

4. A method for screening a candidate compound for an antitumor drug, said method comprising the steps of:

- (a) providing animal cells in which differentiation-inducing potency

is suppressed due to expression of FLT3/ITD;

(b) contacting said cells with a test sample and culturing said cells;

(c) detecting the differentiation-inducing potency of said cells;

and

5 (d) selecting a compound that facilitates differentiation of said cells.

5. The method according to any one of claims 1 to 4, wherein said tumor is a blood cancer.

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6. The method according to claim 5, wherein said blood cancer is acute myeloid leukemia or myelodysplasia syndrome.

7. The method according to any one of claims 1 to 3, wherein said cytokine is IL-3.

15 8. The method according to any one of claims 1 to 4, wherein said animal cells are blood cells.

20 9. The method according to claim 8, wherein said blood cells are FDC-P1, 32D, or BaF cells.

10. The method according to claim 4, wherein said animal cells are 32D cells.

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11. A candidate compound for an antitumor drug, wherein said compound can be isolated by a method according to any one of claims 1 to 10.